16. (amended) The diesel particulate filter of claim 15 wherein the pressure drop across a 2 inch diameter by 6 inch length sample section of the filter is less than 12.9 kPa at an artificial carbon soot loading of 5 grams/liter and a flow rate of 26.65 scfm for a cell density of 100 cells per square inch and a cell wall thickness of about 0.025 inches.

17. (amended) The diesel particulate filter of claim 15 wherein the pressure drop across a 2 inch diameter by 6 inch length sample section of the filter is less than 7.9 kPa at an artificial carbon soot loading of 5 grams/liter and a flow rate of 26.65 scfm for a cell density of about 200 cells per square inch and a cell wall thickness of about 0.020 inches.

23. (amended) A wall-flow filter comprising a cordierite body having a CTE (25-800°C) of greater than $4x10^{-7}$/°C and less than 13 $x10^{-7}$/°C, a permeability and a pore size distribution which satisfy the relation 2.108 (permeability) + 18.511(total pore volume) +0.1863 (percentage of total pore volume comprised of pores between 4 and 40 micrometers) > 24.6, such that at an artificial carbon soot loading of 5 grams/liter and a flow rate of 26 scfm, the filter has a pressure drop across a 2 inch diameter by 6 inch length sample section of in kPa across the filter of less than 8.9 – 0.035 (number of cells per square inch) + 300 (cell wall thickness in inches), wherein the filter has a bulk filter density of at least 0.60 g/cm^3, wherein the filter has the shape of a honeycomb, the honeycomb having an inlet end and an outlet end, and a multiplicity of cells extending from the inlet end to the outlet end, the cells having porous walls, wherein part of the total number of cells at the inlet end are plugged along a portion of their lengths, and the remaining part of cells that are open at the inlet end are plugged at the outlet end along a portion of their lengths, so that an engine exhaust stream passing through the cells of the honeycomb from the inlet end to the outlet end flows into the open cells, through the cell walls, and out of the structure through the open cells at the outlet end.

39. (amended) The filter of claim 24 wherein the pressure drop across a 2 inch diameter by 6 inch length sample section of the filter is less than 12.9 kPa at an artificial carbon soot loading of 5 grams/liter and a flow rate of 26.65 scfm for a cell density of 100 cells per square inch and a cell wall thickness of about 0.025 inches.

40. (amended) The filter of claim 24 wherein the pressure drop across a 2 inch diameter by 6 inch length sample section of the filter is less than 7.9 kPa at an artificial carbon soot loading of 5 grams/liter and a flow rate of 26.65 scfm for a cell density of about 200 cells per square inch and a cell wall thickness of about 0.020 inches.

Respectfully submitted,

Anca C. Gheorghiu
Registration No. 44,120
Corning Incorporated
SP-TI-03-1
Corning, NY 14831
(607) 974-974-3322

Date: September 22, 2003

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 9/22/03
Date of Deposit

Anca C. Gheorghiu
Name of applicant, assignee, or Registered Representative

Signature

9/22/03
Date of Signature